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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,937	09/25/2003	James R. Clark	1-16188	2041

7590 07/11/2005

Attn: Stephen P. Evans, Esq
Marshall & Melhorn, LLC
8th Floor
Four SeaGate
Toledo, OH 43604

EXAMINER	
SCHWARTZ, CHRISTOPHER P	

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,937	CLARK, JAMES R.	
	Examiner	Art Unit	
	Christopher P. Schwartz	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-9 and 12-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-9 and 12-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment filed 4/14/05 has been received and considered. Claims 1-4,7-9,12-16 are pending. Claims 5,6,10,11,17-19 have been canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1- 4,7-9,12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gee et al. '237 in view of either Hicks '378 or Chapter 1 of "Air Brake Basics" and Bueler or Plantan.

Regarding claims 1,7 Gee et al. discloses a brake system concerned with controlling the braking effort exerted upon the front and rear axles of a tractor trailer to maximize braking capability and stability. As discussed in the last paragraph of col. 3 such a balanced braking also reduces wear on the brake pads. Note the actuators at 60-66 and the control valves at 106 and 108. Note that second control valve 106, as broadly claimed, is in direct communication with and downstream of valve 108 and reservoir 68 as seen in the drawings.

Gee lacks discussing varying specific dimensions of the brake actuators 60-66 to accomplish this.

However it is notoriously well known in the art to vary the length of the actuator chamber rods, piston surface area, chamber sizes etc. of the actuator to achieve

different braking forces. It is also known to use differently sized actuators on different axles, as clearly can be seen in the prior art references of record, but not applied.

The references to Hicks (see columns 1 and 2) and the "Air Brake Basics" manual (page 4 column 1) fairly suggest that it is well known to adjust these actuator parameters "... to meet braking requirements".

One having ordinary skill in the art at the time of the invention would have found it to be an obvious alternative to have altered the actuators of Gee et al. to that as claimed by applicant, to distribute the braking effort among the different axles dependent upon loading conditions of the vehicle, since it is notoriously well known in the art to vary these dimensions of the brake actuators to meet specific braking requirements.

Gee et al. also lacks a specific discussion of the particular fluid output ratios of the valves 106,108 to the respective brakes.

However, the references to Bueler (see col 6) or Plantan (see valves 110, and 106,108 in figure 1) teach it is notoriously well known to use proportioning valves to "proportion" the amount of fluid to the front and rear brakes or axles.

Accordingly to have used such a well known valving arrangement as taught by either of these references in place of 106,108 in the device of Gee et al. would have amounted to an alternative equivalent valving arrangement of distributing the braking forces to the front and rear axles to that of Gee et al. dependent upon such well known factors as cost, weight and reliability.

Regarding claims 2-4,8,9,13-16 as discussed above, these requirements are met.

Regarding claim 12 the reference to Hicks is relied upon to show the actuators 60,64 of Gee et al. likely contain "diaphragms".

Response to Arguments

4. Applicant's arguments filed 4/14/05 have been fully considered but they are not persuasive. Applicants have essentially incorporated the limitations of claims 5,6 into independent claim 1. These claims were previously rejected over prior art. Contrary to applicant's central argument, as clearly seen in the drawings of Gee et al., the second control valve 106, as broadly claimed, is in direct communication with and downstream of valve 108 and reservoir 68. It is unclear to the examiner why applicant's think simply incorporating the limitations of previously rejected claims into the independent claims would define over the prior art applied against them.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 571-272-7123. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 571-272-7099. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps
7/5/05

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER